

## Coarse Pitch Gear Hob sharpening

A12-021

Coarse pitch hobs are high performance tools, used for large gear production in hobbing process.

Only a few machies worldwide are able to handle this parts, where the diameter rises up to 20" (508mm) and part weight exceeds 500kg.

The given example is a hob with Ø350mm, 90mm gash depth and 8° spiral angle.

Coarse pitch hobs are sharpened using a corresponding ceramic wheel with an angle. The wheel profile is calculated in Quinto and dressed in the machine in between cycles.



### 1. Cycletime for Resharpening

<b>Workpiece:</b> Diameter 350 mm, Z 10, Length of cutting edge 360 mm Material HSS					
<b>Operations</b>	Probe	Dress	Roughing	Dress	Finishing
<b>Feed [mm/Min]</b>	2000	400	7000	250	5000
<b>Power [kW]</b>		0	0	0	0
<b>Cutting feed [m/s]</b>		35	35	33	33
<b>Used wheels</b>		1V1	1V1	1V1	1V1
<b>Grinding time [s]</b>	30	60	1500	90	720
<b>Total cycle time</b>	~ 40 min @ 0.1mm total removal				

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

### 2. Used Grinding Wheels

1V1 Ø450 20° A60



### 3. Machine and Software Requirements

Machines: 5 axes CNC grinder : CORVUS C500

Control: Fanuc 31i

Accessories:

Responsible engineer: SIW 01.2010

[www.schneeberger.ch](http://www.schneeberger.ch)

J. SCHNEEBERGER Maschinen AG 4914 Roggwil Switzerland

Subsidiaries in: France, Deutschland, Italia, United States, China

Coolant: Synthetic Oil, pressure 6 bar

Software: Quinto 5

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